

Patent Abstracts of Japan

PUBLICATION NUMBER : 2000182816
PUBLICATION DATE : 30-06-00

APPLICATION DATE : 16-12-98
APPLICATION NUMBER : 10375616

RECEIVED

MAR 01 2004

OFFICE OF PETITIONS

APPLICANT : TDK CORP;

INVENTOR : WATANABE MASAHIKO;

INT.CL. : H01F 1/34 C04B 35/36 C04B 35/38 H01F 30/00 H01F 37/00

TITLE : MANGANESE-BASED FERRITE, TRANSFORMER USING THE SAME AND CHOKE COIL

ABSTRACT : PROBLEM TO BE SOLVED: To provide a ferrite, in which high saturation magnetic flux density B_s of at least a prescribed value and low initial permeability μ_i of at most a prescribed value are obtained, relative density does not decrease and the high initial permeability μ_i can be maintained, when the content of Zn in a main component is at most a prescribed value which is close to zero.

SOLUTION: In this ferrite, main component is in a ternary system main component range of iron oxide, manganese oxide and zinc oxide when conversion into Fe_2O_3 , MnO and ZnO is made where following four points A, B, C and D are connected by straight lines. Here, A: $\text{Fe}_2\text{O}_3=58.0$ mol%, $\text{ZnO}: 0$ mol%, B: $\text{Fe}_2\text{O}_3=54.5$ mol%, $\text{ZnO}: 7.0$ mol%, C: $\text{Fe}_2\text{O}_3=53.0$ mol%, $\text{ZnO}: 5.0$ mol%, and D: $\text{Fe}_2\text{O}_3=53.0$ mol%, $\text{ZnO}: 0$ mol% (remainder in each point is MnO). As subcomponent, at most 300 ppm of silicon oxide which is converted into SiO_2 and at most 1,680 ppm of calcium oxide which is converted into CaO are contained. As impurities, P is at most 100 ppm and B is at most 60 ppm.

COPYRIGHT: (C)2000,JPO